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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/961,084	10/30/97	KRONGAUZ V	240606

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CUSHMAN DARBY & CUSHMAN
1100 NEW YORK AVENUE N W
NINTH FLOOR EAST TOWER
WASHINGTON DC 20005-3918

EXAMINER	
BERMAN, S	
ART UNIT	**PAPER NUMBER**
1711	10

DATE MAILED: 10/07/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 08/961,084	Applicant(s) Krongauz et al.
	Examiner Susan Berman	Group Art Unit 1711

☒ Responsive to communication(s) filed on *Aug 24, 1999*.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *19 and 27-49* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *19 and 27-49* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *4*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Claim Rejections - 35 USC § 102 and/or 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 27, 30-34, 36, 41, 42 and 49 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mori et al (4,031,066). Mori et al disclose compositions having excellent electrical properties and flexibility. The compositions comprise a flexible polybutadiene resin, a solid plasticizer and a vinyl monomer. The polybutadiene resin can be an acrylated urethane and fully hydrogenated, as shown in the examples and in column 6, line 64, to column 7, line 3. Mori et al teach adding an adequate quantity of silane coupling agent, thus teaching an adhesion promoter (column 6, lines 14-15). The composition is said to provide excellent electrical properties, such as dielectric dissipation factor, etc (see column 1, lines 49-52, and column 6, lines 22-34 and Table 3). The compositions disclosed by Mori et al comprising a thermosetting polybutadiene resin containing a urethane linking group anticipate the instantly claimed composition.

With respect to claims 30-32 and 49, The properties of the cured coating prepared by radiation curing the claimed composition are considered to be a statement of future intended properties and not of any patentable weight in the absence of a showing of unexpected results. See Table 3 for dielectric dissipation factor. See Table 2 for flexibility tests.

With respect to claim 34, aliphatic polyisocyanates are taught in column 2, lines 59+.

Claims 27 and 30-49 are rejected under 35 U.S.C. § 103(a) as obvious over Mori et al (4,031,066). The disclosure or Mori et al is discussed above.

It would have been obvious to one skilled in the art to select acrylated urethane polybutadienes from the polybutadiene resins taught because urethanes are used in the Examples. With respect to claims 47-48, It would have been obvious to one skilled in the art to select polybutadiene backbones having the molecular weights set forth from those disclosed as being suitable by Mori et al. With respect to claims 35, 37-40, 43-46, It would have been obvious to one skilled in the art to determine the optimum weight percents of components of the compositions disclosed by Mori et al. With respect to claim 35, Mori et al teach adding fillers which would be expected to pigment the compositions.

Claims 19, 27 and 30-49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mori et al (4,031,066) in view of Lee et al (4,786,586). Mori et al disclose the claimed invention except for the requirement that the hydrocarbon backbone be fully saturated. Mori et al teach hydrogenization up to 95 % of unsaturated double bonds in the polybutadiene chain. Lee et al teach analogous compositions comprising acrylate-terminated oligomers wherein the hydrocarbon backbone is fully saturated. Lee et al teach that the fully saturated hydrocarbons are preferred because the long-term flexibility of the cured coating increases as the degree of unsaturation decreases (column 3, lines 17-45). It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute an acrylated urethane

oligomer having a fully saturated backbone, as taught by Lee et al, for the acrylated urethane oligomer int eh compositions disclosed by Mori et al in order to provide long term flexibility, as taught by Lee et al.

Claims 19, 27, ~~2934~~ 29-34, 36-40, 43, and 47-49 are rejected under 35 U.S.C. § 103(a) as being obvious over Krajewski (4,572,610) Krajewski teaches that it is known to provide coating compositions comprising a diethylenic diurethane having a halogen-containing essentially saturated polybutadiene backbone. Krajewski teaches that removal of the unsaturation in the backbone avoids heat instability without introducing brittleness (column 2, lines 42-52). Suitable monomers for the liquid solvent include 2-hydroxyethyl acrylate, which is one of the compounds disclosed by Applicant as an adhesion promoter.

It would have been obvious to one skilled in the art to employ 2-hydroxyethyl acrylate in the liquid solvent, thus providing a composition comprising an adhesion promoter as well as a mono-functional diluent. Krajewski provides motivation by teaching that mon-ethylenically unsaturated liquid solvents are preferred and specifically teaching 2-hydroxyethyl acrylate, among eight specifically mentioned desirable monomers.

With respect to in claims 30-32 and 49, the properties of the cured coating prepared by radiation curing the instantly claimed composition set forth are considered to be a statement of future intended properties and not of any patentable weight in the absence of a showing of unexpected results. Furthermore, the properties set forth would be expected to be inherent to

cured coatings prepared from the compositions disclosed by Krajewski because the components of the disclosed coating compositions correspond to the components as set forth in the instant claims.

Claims 19, 27, 30-49 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Shustack (5,352,712). Shustack discloses coating compositions comprising a hydrocarbon polyol based reactively terminated aliphatic urethane oligomer. See column 9, lines 1-53. Organofunctional silanes are taught as adhesion promoters in columns 14-15.

It would have been obvious to one skilled in the art to include an adhesion promoter in the compositions taught by Shustack because Shustack teaches that an adhesion promoter is optional and is required under conditions of high humiidity and higher temperature. With respect to claims 30-32 and 49, the properties of the cured coating prepared by radiation curing the instantly claimed composition set forth are considered to be a statement of future intended properties and not of any patentable weight in the absence of a showing of unexpected results. Furthermore, the properties set forth would be expected to be inherent to cured coatings prepared from the compositions disclosed by Shustack because the components of the disclosed coating compositions correspond to the components as set forth in the instant claims. It would have been obvious to one skilled in the art to determine the optimum weigh percents of components

disclosed by Shustack to provide the desired properties in the coatings prepared by curing instantly claimed compositions.

Claims 19 and 27-49 are rejected under 35 U.S.C. § 103(a) as obvious over EP 0 801 041. EP '041 discloses compositions comprising an acid functional ethylenically unsaturated monomer, which is preferably an ethylenically unsaturated phosphoric acid. See the composition set forth on page 7, lines 43-50. EP '041 teaches that any conventional coating composition can be modified as taught and that such coating compositions include oligomers based on polyolefins, such as saturated or unsaturated polybutadienes (page 6, lines 36-39).

It would have been obvious to one skilled in the art to include an oligomer based on a polyolefin, such as saturated or unsaturated polybutadiene, in the compositions comprising a polyether urethane acrylate disclosed by EP '041. The reason is that EP '041 teaches that other coating compositions, such as those comprising oligomers based on polyolefins, can be modified by incorporating an ethylenically unsaturated phosphoric acid compound.

Specification

The disclosure is objected to because of the following informalities:

(1) the formula for the phosphoric acid compound in Amendment B to the specification submitted August 08, 1999, does not show the C-C double bond in the acrylate group.

(2) It appears that the graphs in Figures 4(a) and 4(b) are incomplete. There are no lines connecting the points on the graphs.

Appropriate correction is required.

Response to Arguments

Applicant's arguments filed 08-24-99 have been fully considered but they are not persuasive. The rejections of claims under 35 USC 102(b) over Lee et al, Krajewski and Shustack have been withdrawn. New grounds of rejection are set forth above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Berman whose telephone number is (703) 308-0040.

The fax number for this group is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.

Susan Berman

Susan Berman
Primary Examiner
Art Unit 1711

SB
October 6, 1999